

WHAT IS CLAIMED IS:

1. An image sensor unit comprising:
 - an illumination section including a light source and light guide to illuminate a document;
 - 5 an image sensing element for converting an optical image of the document into an electrical signal;
 - a cylindrical lens for focusing the optical image on said image sensing element; and
 - 10 a frame for integrally holding said illumination section, said image sensing element, and said lens, wherein said light guide has undergone antireflection treatment on a surface thereof on the document side.
- 15 2. The unit according to claim 1, wherein the antireflection treatment is coating in black.
3. The unit according to claim 1, wherein the antireflection treatment is a surface treatment for forming a roughened or finely corrugated surface.
- 20 4. The unit according to claim 1, wherein the antireflection treatment is formation of an inclined surface on the document side.
5. The unit according to claim 1, wherein said illumination section comprises a pair of illumination sections so disposed as to sandwich said lens.
- 25 6. The unit according to claim 1, wherein a distance from said image sensing element to the surface of said

light guide on the document side is shorter than a distance from said image sensing element to an end of said lens on the document side.

7. The unit according to claim 1, wherein said frame
5 is open on the document side.

8. An image reading apparatus comprising:

the image sensor unit defined in claim 1; and

a moving mechanism for moving a relative position
between the image sensor unit and the document,

10 wherein the document is scanned by relative
movement between the image sensor unit and the document.

9. The apparatus according to claim 8 further
comprising

a transparent plate for placing and supporting
15 the document, and

a support portion for supporting an end portion
of said transparent plate,

wherein part of the image sensor unit is capable
of placed below said support portion.

20 10. An image sensor unit comprising:

a pair of illumination sections each including a
light source and light guide to illuminate a document;

an image sensing element for converting an
optical image of the document into an electrical
25 signal;

a cylindrical lens for focusing the optical image
on said image sensing element; and

a frame for integrally holding said illumination sections, said image sensing element, and said lens,

wherein said illumination sections are so disposed as to sandwich said lens, said light guides
5 have exit ports for making light from said light sources emerge toward the document, and said exit ports are formed such that a peak of exit light is farther than a focal position of said lens for said image sensing element with respect to said image sensing
10 element, and the focal position is included in a beam crossing region of exit beams from said pair of illumination sections.

11. The unit according to claim 10, wherein each of said light sources are fixed to an end portion of a
15 corresponding one of said light guides.

12. The unit according to claim 11, wherein said light sources are fixed to different end portions of said light guides.

13. The unit according to claim 12, wherein said
20 light sources have same characteristics and are disposed at point-symmetrical positions about an axis extending parallel to an axis of said lens from a substantially center of said image sensing element.

14. The unit according to claim 11, wherein said
25 light sources are fixed to end portions of said light guides on the same side.

15. The unit according to claim 14, wherein said

light sources are mounted on a single circuit board.

16. The unit according to claim 10, wherein said light sources comprise one or more LEDs of a single color or a plurality of colors.

5 17. An image reading apparatus comprising:

the image sensor unit defined in claim 10; and

a moving mechanism for moving a relative position between the image sensor unit and the document,

wherein the document is scanned by relative

10 movement between the image sensor unit and the document.